

Work Order ID 144623

April 21, 2016 2:07:01 PM

144623

Page 1

Item ID: D3573-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Adapter

Start Date: 5/10/2016

Start Qty: 1000

10

Cust Item ID:

Required Date: 5/24/2016

Req'd Qty: 1000

10

Customer:

Reference:

Approvals:

Process Plan: MCS

Date:

APR 22 2016

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3573

Rev A

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blank 3.500" long

12

Ø

DAS

44

9-89

16/05/07

110

0.42

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

3.80

HAAS CNC vertical machine #1

Machine as per Folio FA672 and Dwg D3573

12

Ø

DAS

44

9-89

16/05/07

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.10

Quality Control

12

Ø

DAS

44

9-89

16/05/07

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 2

Item ID: D3573-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Adapter
 Start Date: 5/10/2016 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 5/24/2016 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.20		A. 16/05/08		12	0		DAS 08 9-89
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.40				12x	0	16/03/16	
150 *150* Powdercoat Powder Coating Outsource	Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 M130746 Memo START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____	0.00 0.40		DO 32331		12		MAY 10 2016	DAS 13 9-89

155
Perching

Review & Inspect

12x SP/6-05-b

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Page 3

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 Revision ID: Stop ***NS2***
 Item Name: Adapter
 Start Date: 5/10/2016 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 5/24/2016 Req'd Qty: 10.00 ***10*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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160 *160* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.10				(12)			DAS 38 9-88 MAY 12 2016
170 *170* Packaging Packaging	Identify as per dwg & Stock Location: _____ Memo LOCATION : GA	0.00 0.10							12 MAY 13 2016 DAS 6 8-88
180 *180* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 1.00							MCS MAY 13 2016

MCS MAY 13 2016

DQA: _____ Date: _____



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Date :		Step #:		QTY Effective :		MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				
								Completed By
								Lead hand / Supervisor Approval Verification
								QC / QA Coordinator Approval
Root Cause		FAULT CATEGORY						
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐								

Picklist Print

April 21, 2016 2:07:01 PM

Page 1

Work Order ID: 144623

144623

Parent Item: D3573-1

D3573-1

Parent Item Name: Adapter

Start Date: 5/10/2016

Required Date: 5/24/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A New Issue 07-01-29 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6B0.625X02.50
0

Purchased

No

100

f

22.7700

0.292

3.073684

DAS
44
9-89

16/05/07

M6061T6B0 625X02 500

6061-T6 Bar .625 x 2.50

Location

Loc Qty

Loc Code

MAT002

22.77

M128865

2.17

✓M129972

8.6

M134553

12

3.6'

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

DART AEROSPACE LTD		Work Order:	144623
Description: Adapter		Part Number:	D3573-1
Inspection Dwg: D3573 Rev: A		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

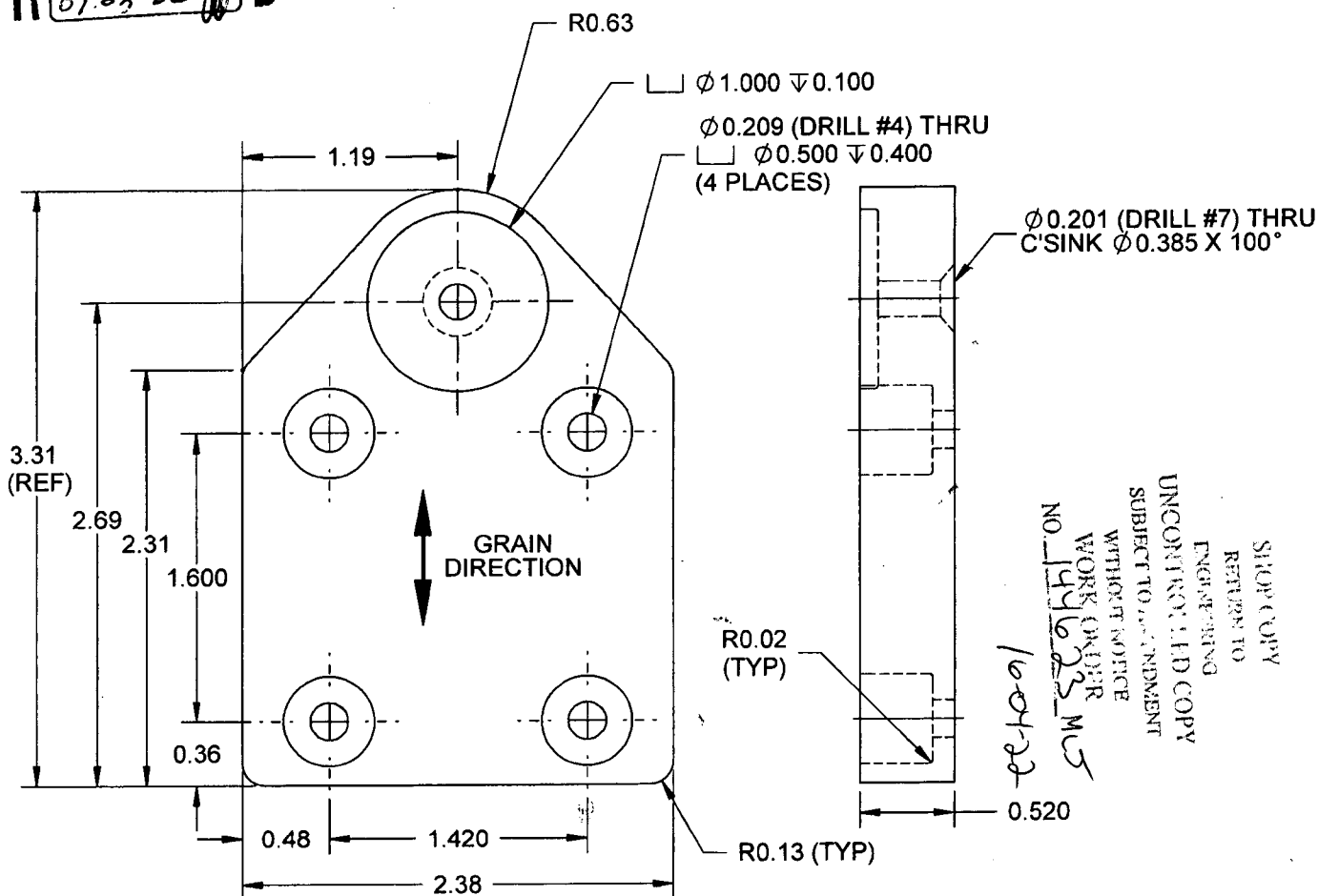
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.31	+/-0.030	3.312	/		Vern	Fk-04
2.69	+/-0.030	2.688	/		"	"
2.31	+/-0.030	2.31	/		"	"
1.600	+/-0.010	1.600	/		"	"
0.36	+/-0.030	.357	/		"	"
1.19	+/-0.030	1.189	/		"	"
2.38	+/-0.030	2.378	/		"	"
1.420	+/-0.010	1.420	/		"	"
0.48	+/-0.030	.475	/		"	"
R0.63	+/-0.030	.63	/		R-G-	
R0.13	+/-0.030	.13	/		"	
R0.02	+/-0.030	.02	/		"	
Ø0.209	+0.005/-0.001	.210	/		Vern	Fk-04
Ø0.201	+0.005/-0.001	.201	/		"	"
0.520	+/-0.010	.516	/		"	"
Ø0.500 x 0.400	+/-0.010	.501 x .402	/		"	"
Ø1.000 x 0.100	+/-0.010	1.001 x .101	/		"	"

DAS		DAS		Prototype Approval:		N/A	
Measured by:	44 9-89	Audited by:	1/8 08 9-89	Date:	16-05-07	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	07.04.04	New Issue	KJ/JLM	

DART

DESIGN <i>LE</i>	DRAWN BY <i>LE</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3573	REV. A SHEET 1 OF 4
DATE 07.02.19	TITLE ADAPTER		SCALE 1:1
REV A	DATE 07.02.19	DESCRIPTION NEW ISSUE	

RELEASED
07.03.22**D3573-1 ADAPTER****NOTES:**

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER QQ-A-225/8 OR QQ-A-200/8 OR AMS 4117/4128/4115/4116 OR AMS 4160
(REF DART SPEC M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFY WITH DART P/N "D3573-1" USING FINE POINT PERMANENT INK MARKER
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX

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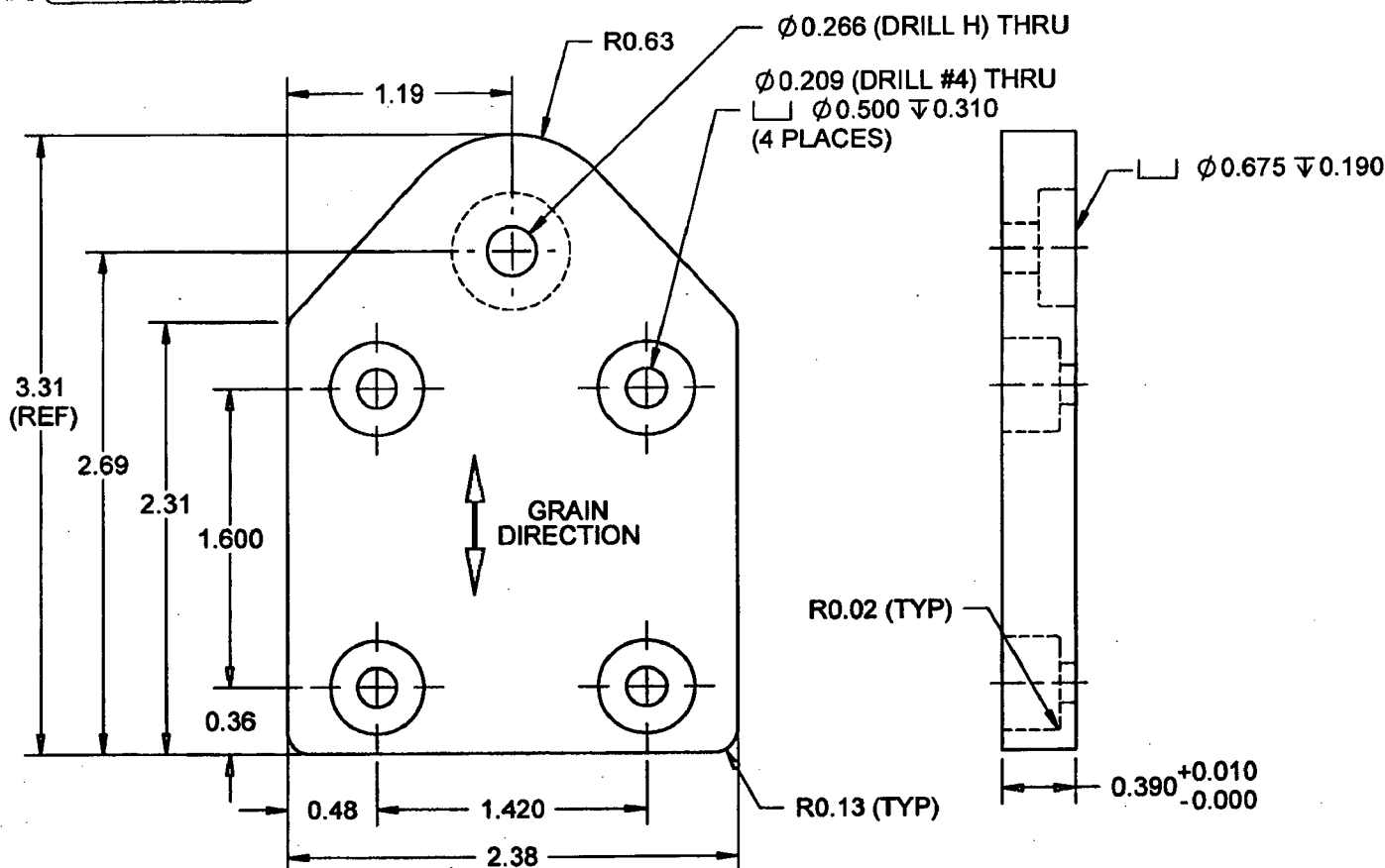
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DATE 07.02.19	TITLE ADAPTER		SCALE 1:1

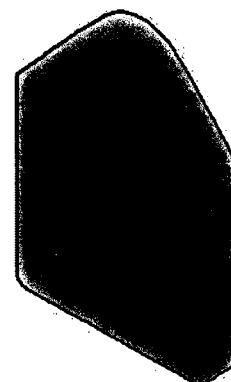
RELEASED
07.04.02



D3573-3 ADAPTER

NOTES:

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER QQ-A-225/8 OR QQ-A-200/8 OR AMS 4117/4128/4115/4116 OR AMS 4160
(REF DART SPEC M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFY WITH DART P/N "D3573-3" USING FINE POINT PERMANENT INK MARKER
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX



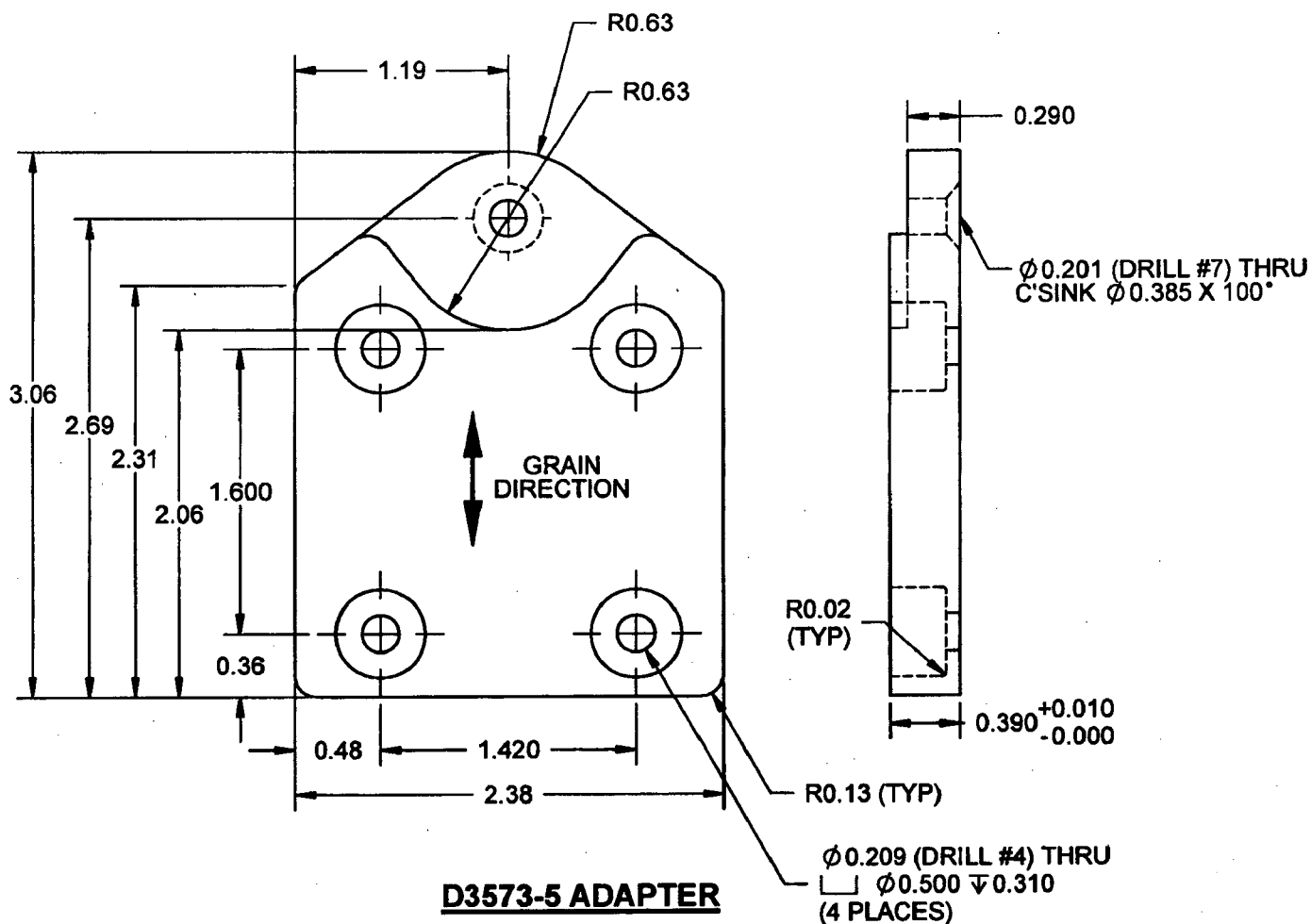
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DATE 07.02.19		TITLE ADAPTER	SCALE 1:1

RELEASED
07.04.02



NOTES:

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER QQ-A-225/8 OR QQ-A-200/8 OR AMS 4117/4128/4115/4116 OR AMS 4160
(REF DART SPEC M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFY WITH DART P/N "D3573-5" USING FINE POINT PERMANENT INK MARKER
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX

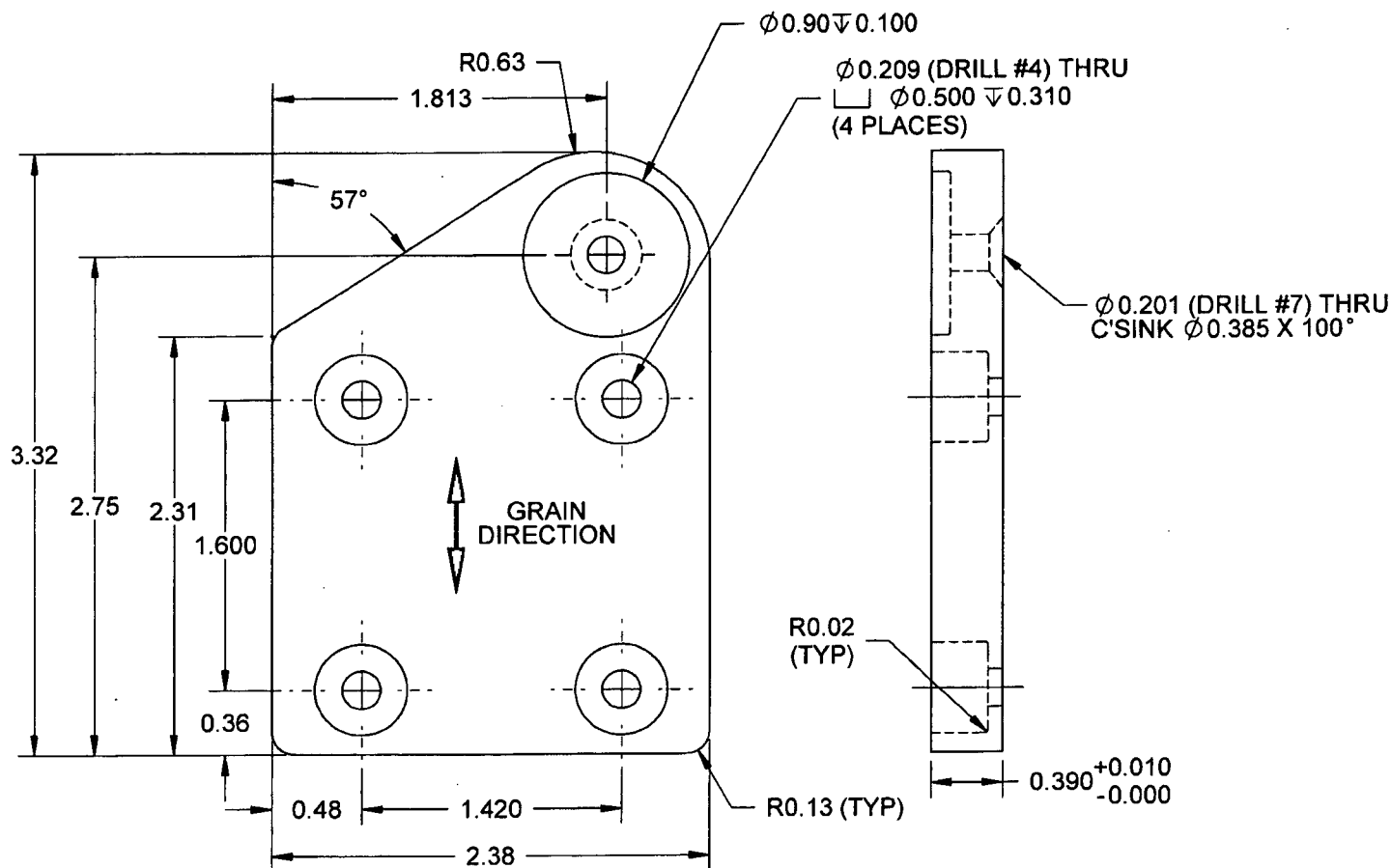
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CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3573
DATE 07.02.19	TITLE ADAPTER	REV. A SHEET 4 OF 4 SCALE 1:1

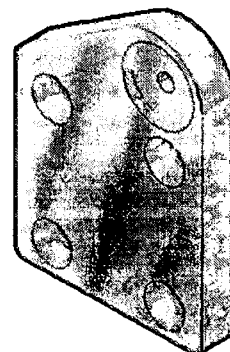
RELEASED
07.04.02



D3573-7 ADAPTER (SHOWN)
D3573-8 ADAPTER (OPPOSITE)

NOTES:

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR
PER QQ-A-225/8 OR QQ-A-200/8 OR AMS 4117/4128/4115/4116 OR AMS 4160
(REF DART SPEC M6061T6B)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "GREY SANDTEX" (4.3.5.6) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) IDENTIFY WITH DART P/N "D3573-7/-8" USING FINE POINT PERMANENT INK MARKER
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX



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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO32331

Purchase Order Date 5/10/2016
PO Print Date 5/11/2016

Page Number 1 of 3

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

Contact Name

Vendor Phone

613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	142768 Powder coat per QSI005	D4330-3 DOOR BRACKET	5/12/2016 Yes 5/12/2016		14.00	\$5.25	\$73.50
						Line Total:	\$73.50
2	142663 Powder coat per QSI005	D3206-1 PEDAL ARM	5/12/2016 Yes 5/12/2016		14.00	\$9.00	\$126.00
						Line Total:	\$126.00
3	144623 Powder coat per QSI005	D3573-1 ADAPTER ✓	5/12/2016 Yes 5/12/2016		12.00	\$9.00	\$108.00

PO Instructions: PROCUREMENT QUALITY CLAUSES
A000 CLAUSES NOT REQUIRED

Note:

5/11/2016

SP16-05-12

Generic Quote Calculator - quoted by: Roger L

Line	Part Number	Qty	Requirement 1	Unit Cost	Req 2	Unit Cost	Req 3
1	142768	14	powder coated	\$5.25		\$0.00	
2	142663	14	powder coated	\$9.00		\$0.00	
3	144623	12	powder coated	\$9.00		\$0.00	
4	144747	8	powder coated	\$9.00		\$0.00	
5	144749	10	powder coated	\$5.00		\$0.00	
6	143417	1	powder coated	\$20.00		\$0.00	
7	144917	2	powder coated	\$14.00		\$0.00	
8	144831	6	powder coated	\$18.00		\$0.00	
9	144949	1	powder coated	\$20.00		\$0.00	
10	Adminastration fee			\$125.00		\$0.00	
11						\$0.00	
12						\$0.00	
13						\$0.00	
14						\$0.00	
15				\$0.00		\$0.00	
16				\$0.00		\$0.00	
17				\$0.00		\$0.00	
18				\$0.00		\$0.00	
Repeat Job		YES	NO	Black Ano \$125	Color Ano \$150.00	Passivate	
Lot Charges		Paint \$185	Clear Ano \$125	Hard Ano \$175	Chem Film		
COMMENT		P032331					
Pricing is based on lot charges when possible							
Anodize Pricing is based on how many parts can be processed per hour - when exceeding lot ch							
Painting Pricing is based on how many parts can be processed per hour - when exceeding lot ch							

8/16-05-12

	Unit Cost	TOTAL COST
	\$0.00	\$73.50
	\$0.00	\$126.00
	\$0.00	\$108.00
	\$0.00	\$72.00
	\$0.00	\$50.00
	\$0.00	\$20.00
	\$0.00	\$28.00
	\$0.00	\$108.00
	\$0.00	\$20.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
	\$0.00	\$0.00
		\$605.50
	\$115.00	
	\$115.00	
arges		
arges		

Sp. 6052